

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
23 June 2005 (23.06.2005)

PCT

(10) International Publication Number
WO 2005/057016 A2

(51) International Patent Classification⁷: F04D (81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(21) International Application Number: PCT/US2004/040760

(22) International Filing Date: 6 December 2004 (06.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/527,334 5 December 2003 (05.12.2003) US

(71) Applicant (*for all designated States except US*): ARGO-TECH CORPORATION [US/US]; 23555 Euclid Avenue, Cleveland, OH 44107 (US).

(72) Inventor; and

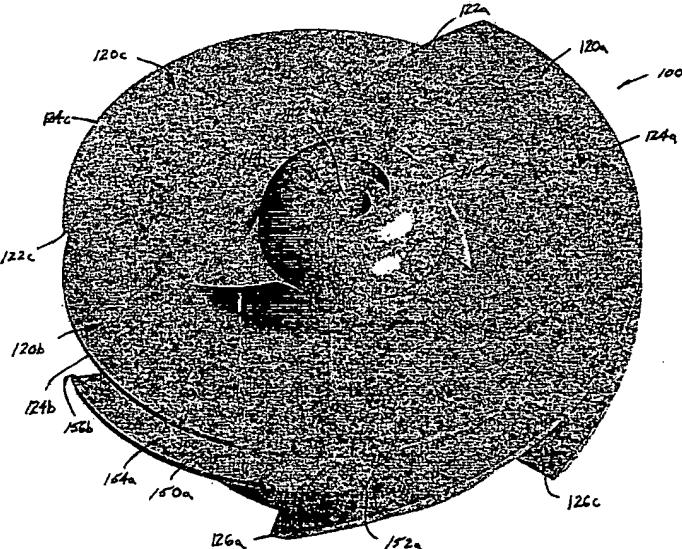
(75) Inventor/Applicant (*for US only*): LEE, JinKook [US/US]; 6166 Darlene Cir, Concord, OH 44077 (US).

(74) Agent: NAUMAN, Timothy, E.; Fay, Sharpe, Fagan, Minnich & McKee, LLP, 1100 Superior Avenue, 7th Floor, Cleveland, OH 44114 (US).

Published:
— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: HIGH PERFORMANCE INDUCER



WO 2005/057016 A2

(57) Abstract: An improved high performance inducer for a pump assembly includes a set of primary blades and splitter blades to achieve a vapor-to-liquid ratio up to 1:1. Minimum back pressure is provided at the leading edge to aid in getting fluid into the blades where the vapor component of the pumped fluid is removed. A hub increases in diameter over the axial extent of the helical blades, thereby resulting in a decreasing depth of the blades between the inlet and outlet of the inducer. A substantial improvement in removing fluid from a storage reservoir is obtained resulting in a substantial savings in shipping costs.